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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/814,044 | 03/21/2001 | Gordon Taylor Davis | RAL920000083US1 | 3527 |
| 25299 | 7590 | 06/15/2005 | EXAMINER | |
| IBM CORPORATION PO BOX 12195 DEPT 9CCA, BLDG 002 RESEARCH TRIANGLE PARK, NC 27709 | | | ODOM, CURTIS B | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2634 | |

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/814,044 | Applicant(s) DAVIS ET AL. | |
| | Examiner Curtis B. Odom | Art Unit 2634 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-11 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because all elements of each drawing figure are suggested to be labeled (see Fig. 3, block 34). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edem (previously cited in Office Action 7/30/2004) in view of Cassiers et al. (U. S. Patent No. 6, 850, 539).

Regarding claim 1, Edem discloses a low power DSL modem transmitter (Fig. 8), suitable for incorporation in integrated DSL server line cards comprising:

first means for generating full power physical frames (Fig. 5, column 8, lines 7-47, Table 1) including a control channel signal component (wherein D channel and maintenance bits are control data components as disclosed in column 4, lines 24-38 and Fig. 4, block 62, column 7, lines 64-67) and a data channel signal (Ethernet data stream) component when the transmitter is provided with data to transmit; and,

second means for generating low power physical frames (Figs. 8 and 9, block 230, column 8, line 45-column 11, line 47) having a control channel signal component (column 9,

lines 43-65, D and maintenance channel bits) when the transmitter has no data to transmit (column 8, line 45-column 9, line 6), and

third means (Fig. 8, block 210', column 10, lines 28-34) responsive to a control signal for selecting the frames generated by the first and second means wherein selection of the second means is based on the transmitter having no data to transmit (column 12, line 56-column 13, line 17).

Edem does not disclose the device includes a control channel generating circuit responsive to the first means and operable to generate a control signal when the transmitter has no data to transmit, wherein the selection of the second means is not based on results of negotiations between the transmitter and a remote entity.

However, Cassiers et al. disclose a control channel generating circuit (Fig. 1, AD) which detects whether there is data to transmit and generates a control signal based on the detection of data. The control channel generating circuit selects between a full (high) power mode (high power frames) and a low power mode (low power frames) of transmission based on whether there is data to transmit, not because of negotiations between the transmitter and a remote entity (column 5, lines 4-13). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the modem transmitter of Edem with the control channel generating circuit of Cassiers et al. to generate the control signal to select between a full (high) power mode (high power frames) and a low power mode (low power frames) based on whether there is data to transmit and not negotiations. This would allow for a faster transition when switching between full (high) power mode (high power frames) and low power mode (low power frames) and would also conserve power at the transmitter because the negotiations would not

have to be performed (The transmitter would not have to use power to transmit messages during negotiation since it would be eliminated).

Regarding claim 2, which inherits the limitations of claim 1, Edem discloses the second means includes a low power synchronization signal in the generated low power physical frames (column 9, lines 43-65).

Regarding claim 3, which inherits the limitation of claim 2, Edem discloses the low power synchronization signal is an idle pattern (Abstract, column 3, lines 36-54, and column 9, lines 43-65), wherein the idle state is a pattern in the low power frame which allows recovery between data bursts and identification of a frame and thus, can be considered a synchronization signal.

Regarding claims 4-6, the claimed method includes features corresponding to the subject matter mentioned in the above rejection claims 1-3, which is applicable hereto.

Allowable Subject Matter

4. Claims 7-11 are allowable over prior art references because related references do not disclose a plurality of DSL modems configured to transmit a reduced power frame to maintain synchronization when there is no data to transmit; and controlling the power dissipated by the modems by calculating the power dissipated by the modems periodically, comparing the calculated power to a predetermined value and reducing the total power dissipated by limiting the amount of transmitted data.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tzannes (U. S. Patent No. 6, 567, 473) discloses switching from a low power mode to a high power mode of operations based on whether there is data to transmit.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom
June 7, 2005



STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600